Remarks

I. Amendment to the Specification

The amendment to the specification corrects a clerical error in example 8, wherein the position of the amino group was inadvertently omitted. The indicated structure of example 8 clearly shows an amino group at the 2 position. Additionally, the compounds of the present invention are all 2-amino compounds, so that one skilled in the art would immediately appreciate the error, and the necessary correction. See MPEP 2163.07 (I) and (II). Thus, no new matter is introduced by the amendment.

II. Objection to the Abstract

The abstract has been amended in accordance with the suggestions of the Examiner. It is believed that the new abstract complies with all applicable rules.

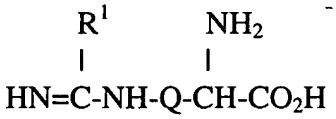
III. Rejection of claim 28 under 35 U.S.C. § 112

Claim 28 stands rejected under 35 U.S.C. § 112, second paragraph as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 28 has been amended to recite 2-amino compounds, as described at pages 30-31 of the specification, and as generically described at pages 6 –7 of the specification (describing generically 2-amino compounds). Thus no new matter is introduced, and it is believed that claim 28, as amended, complies with 35 U.S.C. § 112. Therefore, it is respectfully requested that the rejection under 35 U.S.C. § 112, second paragraph be withdrawn.

IV. Rejection of claims 1-31 under 35 U.S.C. § 103(a)

Claims 1-31 are pending in the instant application. Claims 1-31 stand rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Beams et al. (WO 93/13055). For the following reasons, this rejection is respectfully traversed.

Beams et al. does not exemplify the compounds of the present invention. Beams et al. teaches a generic structure:



with numerous variations within a variable core, denoted "Q." The variable Q may be alkylene, alkenylene, alkynylene having 3-6 carbon atoms, thiol, sulfoxide, sulfonyl, alkoxy, or NR^2 where R^2 is H or C_{1-6} alkyl, a carbocyclic ring, or heterocyclic ring. The variable R^1 may be C_{1-6} alkyl, C_{2-6} alkenyl, C_{2-6} alkynyl, a C_{3-6} cycloalkyl group, or a $C3_{-6}$ cycloalkylC_{1-6}alkyl group.

Thus, the instantly claimed compounds are not obvious in view of the Beams reference. See MPEP 2144.08; *In re Jones*, 958 F.2d 347, 350, 21 USPQ2d 1941, 1943 (Fed. Cir. 1992) (Federal Circuit has "decline[d] to extract from *Merck* [*& Co. v. Biocraft Laboratories Inc.*, 874 F.2d 804, 10 USPQ2d 1843 (Fed. Cir. 1989)] the rule that... regardless of how broad, a disclosure of a chemical genus renders obvious any species that happens to fall within it."); *In re Grabiak,* 769 F.2d 729, 731, 226 U.S.P.Q. 870, 872 (Fed. Cir. 1985) ("[G]eneralization is to be avoided insofar as specific structures are alleged to be *prima facie* obvious one from the other."); *In re Baird* 29 U.S.P.Q.2D (BNA) 1550, 1552 (Fed. Cir. 1994))(The fact that a claimed species or subgenus is encompassed by a prior art genus is not sufficient by itself to establish a *prima facie* case of obviousness).

Moreover, the instant specification provides the following background at page 5, lines 12-16:

> Various attempts have been made to improve the potency and selectivity of NOS inhibitors by adding one or more rigidifying elements to the inhibitor's structure. Publications by Y. Lee et al (Bioorg. Med. Chem. 7, 1097 (1999)) and R. J. Young et al (Bioorg. Med. Chem. Lett. 10, 597 (2000)) teach that imposing conformational rigidity with one or more carbon-carbon double bonds is not a favorable approach to impart selectivity for NOS inhibitors.

Thus, at the time of filing of the instant application, at least two literature references were available that taught against the use of carbon-carbon double bonds, such as those taught in the instant application. The Young reference (IDS reference C10) is

particularly significant, in that Richard M. Beams (a named inventor of WO 93/13055) is a co-author of the Young reference. Therefore, a later reference by an inventor of the asserted prior art, Beams et al., WO 93/13055, teaches away from the instant invention. It is therefore respectfully requested that the rejection of claims 1-31 under 35 U.S.C. § 103(a) be withdrawn.

III. Obviousness-type Double Patenting

Claims 1-27 stand rejected under the judicially created doctrine of obviousness-type double patenting over claims 1-28 of co-pending application serial number 09/834,815.

Without acquiescing to the propriety of such a rejection, applicants file herewith a terminal disclaimer. It is believed that the terminal disclaimer filed with this amendment is sufficient to overcome the rejection under the judicially created doctrine of obviousness-type double patenting for claims 1-27, and it is respectfully requested that this rejection be withdrawn.

Conclusion

In view of the above, it is submitted that Claims 1-31 are in condition for allowance. Reconsideration of the rejections and objections is requested, and allowance of Claims 1-31 at an early date is solicited.

If the Examiner believes a telephonic interview with Applicant's representative would aid in the prosecution of this application, he is cordially invited to contact Applicant's representative at the below listed number.

Respectfully submitted,

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PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICANT:. Pitzele et al.

GROUP ART UNIT: 1621

SERIAL NO.: 09/835,196

EXAMINER: Paul Zucker

FILED: April 13, 2001

DOCKET NO.: 3313

FOR: 2-Amino-4,5 Heptenoic Acid Derivatives Useful as Nitric Oxide Synthase Inhibitors

I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail in an envelope addressed to: Assistant Commissioner of Patents and Trademarks, Washington D.C., 20231.
Philip B. Polster II
Reg. No. 43,864

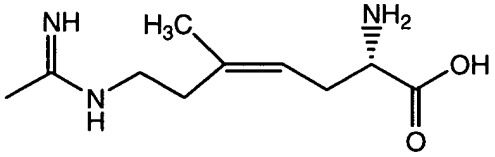
Date: October 16 2002

Version with Markins to Show Changes Made

In the Specification:

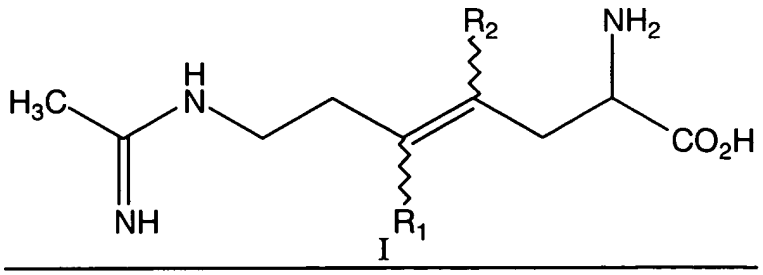
Page 31, lines 21-25:

Example 8 (2S, 4Z)-2-Amino-5-methyl-6-(1-iminoethylamino)-hept-4-enoic acid



Abstract

The present invention is directed to a compound of formula I:



I

or a pharmaceutically acceptable salt thereof, wherein:

R_1 is selected from the group consisting of H and methyl; and

R_2 is selected from the group consisting of H and methyl.

The compounds possess useful nitric oxide synthetase inhibiting activity, and are expected to be useful in the treatment or prophylaxis of a disease or condition in which the synthesis or over synthesis of nitric oxide forms a contributory part.

In the Claims:

28. (amended) A compound selected from the group consisting of:

(2S, 4E)-2-Amino-6-(1-iminoethylamino)-hept-4-enoic acid;

(2S, 4Z) -2-Amino-6-(1-iminoethylamino)-hept-4-enoic acid;

(2 R/S, 4E)- 2-Amino-4,5-dimethyl-6-(1-iminoethylamino)-hept-4-enoic acid;

(2 R/S, 4Z)- 2-Amino-4,5-dimethyl-6-(1-iminoethylamino)-hept-4-enoic acid;

(2S, 4E)- 2-Amino-4-methyl-6-(1-iminoethylamino)-hept-4-enoic acid;

(2S, 4Z)- 2-Amino-4-methyl-6-(1-iminoethylamino)-hept-4-enoic acid;

(2S, 4E)- 2-Amino-5-methyl-6-(1-iminoethylamino)-hept-4-enoic acid;

(2S, 4Z)- 2-Amino-5-methyl-6-(1-iminoethylamino)-hept-4-enoic acid;

(2R, 4E)-2-Amino-6-(1-iminoethylamino)-hept-4-enoic acid; and

(2R, 4Z)- 2-Amino-6-(1-iminoethylamino)-hept-4-enoic acid.